



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/447,301	11/23/1999	SATOSHI YOSHIHARA	P99.1899	3648

33448 7590 07/24/2003

ROBERT J. DEPKE LEWIS T. STEADMAN
HOLLAND & KNIGHT LLC
131 SOUTH DEARBORN
30TH FLOOR
CHICAGO, IL 60603

EXAMINER

HANNETT, JAMES M

ART UNIT	PAPER NUMBER
----------	--------------

2612

DATE MAILED: 07/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/447,301

Applicant(s)

YOSHIHARA, SATOSHI

Examiner

James M Hannett

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2612

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Solid-State image-pickup device capable of producing a good signal output by eliminating variations in sensitivity from sensor to sensor and a deviation in signal-charge fetching between sensors.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1: Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,196,939

Elabd et al.

2: As for Claim 1, Elabd et al depicts in Figure 4 and teaches on Column 1, Lines 65-68 and Column 2, Lines 12-17 and Column 4, Lines 28-41 a solid state image pickup device (31) having

Art Unit: 2612

a sensor array (13) comprising a plurality of sensors; and a plurality of transfer registers (17A and 17B) for transferring signal charges from the sensors of the sensor array, wherein an accumulation gate (33) for reading out signal charges from the sensors at the same time, accumulating the signal charges and allocating the signal charges to the transfer registers is provided between the sensor array and the transfer registers. The accumulation gate is viewed by the examiner as the storage register (33).

3: In regards to Claim 2, Elabd et al teaches on Column 4, Lines 15-20 and Lines 31-33 That the image array comprises a read-out gate (15) provided between the array of sensors and the accumulation gate. The vertical register 15 that are used to transfer rows of data held in the image array to the storage register 33 is viewed by the examiner as a read-out gate that is provided between the array of sensors and the accumulation gate.

4: As for Claim 3, Elabd et al depicts in Figures 6B-F and teaches on Column 6, Lines 16-28 The accumulation gate (storage register) sets a difference in electric potential oriented in a transfer direction. Elabd et al teaches that by clocking the gates overlaying the storage register the charge will be transferred to the transfer register. Therefore, the storage register sets a difference in electric potential oriented in the direction or the transfer registers.

5: In regards to Claim 4, Elabd et al teaches on Column 4, Lines 42-48 and Column 6, Lines 3-6 that the signal charges of the sensors are accumulated in the accumulation gate (storage register 33) to be allocated in units of electrical charge each originated by one of the sensors. Elabd et al teaches that the charges from all of the pixels in the image sensor array are output individually by row to the storage register (33), which is viewed as the accumulation gate.

Art Unit: 2612

6: As for Claim 5, Elabd et al teaches on Column 4, Lines 42-48 The signal charges of the sensors are allocated to the transfer registers for each odd sensor and each even sensor of the sensor array. Elabd et al teaches that transfer register 17A receives the charge stored in the even-numbered columns of the transferred row, and transfer register 17B receives charge stored in the odd-numbered columns of the transferred row.

7: In regards to Claim 6, Elabd et al depicts in Figure 4 and teaches on Column 1, Lines 65-68 and Column 2, Lines 12-17 and Column 4, Lines 28-41 a method of driving a solid-state image pickup device having: a sensor array (31) comprising a plurality of sensors (13); a plurality of transfer registers (17A and 17B) for transferring signal charges from the sensors of the sensor array; and an accumulation gate (33) provided between the sensor array and the transfer registers, the method comprising the steps of: reading out signal charges from the sensors to the accumulation gate at the same time; allocating the signal charges of the sensors from the accumulation gate to the transfer registers; and driving the transfer registers to output the signal charges. The accumulation gate is viewed by the examiner as the storage register (33).

8: As for Claim 7, Elabd et al depicts in Figure 6A and teaches on Column 5, Lines 14-58 that the transfer registers (17A and 17B) are driven at the same time. Elabd et al teaches that both transfer registers are driven by Signals (H1-H4) Since these signals are supplied to both transfer registers, they are driven at the same time.

9: In regards to Claim 8, Elabd et al teaches on Column 4, Lines 42-48 the signal charges of the sensors are allocated to the transfer registers for each odd sensor and each even sensor of the sensor array. Elabd et al teaches that transfer register 17A receives the charge stored in the even-

numbered columns of the transferred row, and transfer register 17B receives charge stored in the odd-numbered columns of the transferred row.

Conclusion

10: The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 6,452,634 Ishigami et al; US 2002/0118291 Ishigami et al; USPN 5,812,192 Ishigami et al; USPN 5,387,935 Kobayashi.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hannett whose telephone number is 703-305-7880. The examiner can normally be reached on 9:00 am to 6:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-842-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is 703-308-6789.

James Hannett
Examiner
Art Unit 2612

JMH
July 22, 2003


TUAN HO
PRIMARY EXAMINER